

Nonferrous Forging: 2002

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2002 Economic Census

Manufacturing

Industry Series



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U.S. Department of Commerce
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-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year ¹	Com- panies ²	All estab- lish- ments ³	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)				
332112, Nonferrous forging 2002..	64	70	9 635	410 257	6 928	16 179	250 615	813 887	933 059	1 792 828	109 255
2001..	N	N	11 394	455 629	8 385	17 666	300 997	1 098 812	1 072 689	2 143 389	111 221
2000..	N	N	9 942	402 535	7 573	15 430	271 629	1 045 692	997 340	2 032 686	105 565
1999..	N	N	9 558	377 637	7 181	14 176	248 595	1 031 784	953 516	1 987 063	93 769
1998..	N	N	9 258	353 955	7 026	14 761	242 438	999 364	855 104	1 845 332	51 793
1997..	75	83	8 991	363 301	6 850	15 270	254 379	991 288	856 947	1 838 385	126 239

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments ²		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
332112, Nonferrous forging												
United States	1	70	44	9 635	410 257	6 928	16 179	250 615	813 887	933 059	1 792 828	109 255
California	—	17	15	2 505	116 187	1 761	5 072	64 821	203 325	288 433	530 527	17 413
Illinois	7	8	4	1 192	59 053	815	1 948	31 815	93 031	101 282	188 287	7 431
Michigan	1	10	7	667	27 326	567	1 250	20 904	95 781	52 084	149 084	4 710

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1—10 to 19 percent; 2—20 to 29 percent; 3—30 to 39 percent; 4—40 to 49 percent; 5—50 to 59 percent; 6—60 to 69 percent; 7—70 to 79 percent; 8—80 to 89 percent; 9—90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 3. Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
332112, Nonferrous forging	
Companies ¹	number.. 64
All establishments ²	number.. 70
Establishments with 1 to 19 employees	number.. 26
Establishments with 20 to 99 employees	number.. 21
Establishments with 100 employees or more	number.. 23
All employees ³	number.. 9 635
Total compensation	\$1,000.. 518 895
Annual payroll	\$1,000.. 410 257
Total fringe benefits	\$1,000.. 108 638
Production workers, average for year	number.. 6 928
Production workers on March 12	number.. 6 987
Production workers on May 12	number.. 6 951
Production workers on August 12	number.. 6 867
Production workers on November 12	number.. 6 898
Production worker hours	1,000.. 16 179
Production worker wages	\$1,000.. 250 615
Total cost of materials	\$1,000.. 933 059
Materials, parts, containers, packaging, etc., used	\$1,000.. 688 569
Resales	\$1,000.. 3 395
Purchased fuels	\$1,000.. 35 798
Purchased electricity	\$1,000.. 36 556
Contract work	\$1,000.. 168 741
Quantity of electricity purchased for heat and power	1,000 kWh.. 596 660
Quantity of electricity generated less sold for heat and power	1,000 kWh.. -
Total value of shipments	\$1,000.. 1 792 828
Primary products value of shipments	\$1,000.. 1 623 584
Secondary products value of shipments	\$1,000.. 134 832
Total miscellaneous receipts	\$1,000.. 34 412
Value of resales	\$1,000.. D
Contract receipts	\$1,000.. D
Other miscellaneous receipts	\$1,000.. 25 155
Primary products specialization ratio	percent.. 92
Value of primary products shipments made in all industries	\$1,000.. 1 844 523
Value of primary products shipments made in this industry	\$1,000.. 1 623 584
Value of primary products shipments made in other industries	\$1,000.. 220 939
Coverage ratio	percent.. 88
Value added	\$1,000.. 813 887
Total inventories, beginning of year	\$1,000.. 407 035
Finished goods inventories	\$1,000.. 107 108
Work-in-process inventories	\$1,000.. 167 518
Materials and supplies inventories	\$1,000.. 132 409
Total inventories, end of year	\$1,000.. 375 956
Finished goods inventories	\$1,000.. 93 535
Work-in-process inventories	\$1,000.. 135 209
Materials and supplies inventories	\$1,000.. 147 212
Gross value of depreciable assets (acquisition costs) at beginning of year	\$1,000.. 1 078 316
Total capital expenditures (new and used)	\$1,000.. 109 255
Buildings and other structures (new and used)	\$1,000.. 16 538
Machinery and equipment (new and used)	\$1,000.. 92 717
Automobiles, trucks, etc., for highway use	\$1,000.. 2 499
Computers and peripheral data processing equipment	\$1,000.. 7 244
All other expenditures for machinery and equipment	\$1,000.. 82 974
Total retirements	\$1,000.. 39 519
Gross value of depreciable assets at end of year	\$1,000.. 1 148 052
Depreciation charges during year	\$1,000.. 71 317
Total rental payments	\$1,000.. 24 388
Buildings and other structures	\$1,000.. 9 901
Machinery and equipment	\$1,000.. 14 487
Total other expenses ⁴	\$1,000.. 133 489
Response coverage ratio ⁵	percent.. 66
Repair and maintenance services of buildings and/or machinery ⁴	\$1,000.. 25 374
Communications services ⁴	\$1,000.. 2 642
Legal services ⁴	\$1,000.. 2 145
Accounting, auditing, and bookkeeping services ⁴	\$1,000.. 2 328
Advertising and promotional services ⁴	\$1,000.. 1 224
Expensed computer hardware and supplies and purchased computer services ⁴	\$1,000.. 1 279
Refuse removal (including hazardous waste) services ⁴	\$1,000.. 2 238
Management consulting and administrative services ⁴	\$1,000.. 3 884
Taxes and license fees ⁴	\$1,000.. 5 767
All other expenses ⁴	\$1,000.. 86 667

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Based on Annual Survey of Manufactures (ASM) sample data.

⁵A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E ¹	All establishments ²	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)				
332112, Nonferrous forging											
All establishments	1	70	9 635	410 257	6 928	16 179	250 615	813 887	933 059	1 792 828	109 255
Establishments with—											
1 to 4 employees	9	10	19	803	15	29	533	1 845	2 266	4 111	255
5 to 9 employees	8	8	47	2 129	36	69	1 373	4 373	4 843	9 225	478
10 to 19 employees	6	8	109	4 541	91	198	3 437	10 659	8 929	20 127	1 178
20 to 49 employees	3	8	266	12 884	186	399	7 355	24 249	26 812	51 294	1 846
50 to 99 employees	—	13	f	D	D	D	D	D	D	D	D
100 to 249 employees	—	14	2 321	100 163	1 666	4 088	55 714	216 888	289 160	540 388	19 239
250 to 499 employees	2	4	1 396	61 568	1 072	2 593	38 784	149 072	129 221	275 678	10 215
500 to 999 employees	2	4	2 712	112 013	2 151	5 159	74 998	129 190	153 062	289 538	24 974
1,000 to 2,499 employees	—	1	g	D	D	D	D	D	D	D	D
2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—
Administrative records ⁴	9	20	105	4 520	84	164	3 076	10 390	12 752	23 142	1 436

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments ¹	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)				
332112	Nonferrous forging.....	70	9 635	410 257	6 928	16 179	250 615	813 887	933 059	1 792 828	109 255
3321121	Hot impression die impact, press, and upset nonferrous forgings.....	44	6 885	282 198	4 981	11 714	178 901	606 727	667 871	1 292 840	79 409
3321122	Other nonferrous forgings	7	2 651	123 965	1 866	4 309	68 811	198 395	255 321	481 351	28 785

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. **Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
332112	Nonferrous forging	2002.. N 1997.. N	X X	X X	1 844 523 2 083 289
3321121	Hot impression die impact, press, and upset nonferrous forgings	2002.. N 1997.. N	X X	X X	1 388 887 1 528 804
33211211	Hot impression die impact, press, and upset aluminum and aluminum alloy forgings	2002.. N 1997.. N	X X	X X	703 242 903 881
3321121101	Hot impression die impact, press, and upset aluminum and aluminum alloy forgings	1,000 s tons. 2002.. 36 1997.. 35	X X	S 73.5	703 242 903 881
33211212	Hot impression die impact, press, and upset titanium and titanium alloy forgings	2002.. N 1997.. N	X X	X X	342 957 324 580
3321121206	Hot impression die impact, press, and upset titanium and titanium alloy forgings	1,000 s tons. 2002.. 22 1997.. 25	X X	S 16.8	342 957 324 580
33211213	Other hot impression die impact, press, and upset nonferrous	2002.. N 1997.. N	X X	X X	342 688 285 501
3321121311	Hot impression die impact, press, and upset copper and copper-base alloy forgings	1,000 s tons. 2002.. 13 1997.. 10	X X	S 7.9	105 405 39 413
3321121316	Other hot impression die impact, press, and upset nonferrous forgings	1,000 s tons. 2002.. 17 1997.. 20	X X	S 16.6	237 283 246 088
3321121Y	Hot impression die impact, press, and upset nonferrous forgings, nsk	2002.. N 1997.. N	X X	X X	N 14 842
3321121YWV	Hot impression die impact, press, and upset nonferrous forgings, nsk	2002.. N 1997.. N	X X	X X	N 14 842
3321122	Other nonferrous forgings	2002.. N 1997.. N	X X	X X	436 467 518 512
33211221	Other nonferrous forgings	2002.. N 1997.. N	X X	X X	436 076 514 045
3321122101	Cold impression die impact, press, and upset nonferrous forgings	1,000 s tons. 2002.. 5 1997.. 8	X X	S D	118 058 D
3321122106	Seamless rolled ring nonferrous forgings	1,000 s tons. 2002.. 5 1997.. 6	X X	S 5.0	225 245 68 689
3321122111	Open die or smith nonferrous forgings, hammer or press	1,000 s tons. 2002.. 4 1997.. 9	X X	S D	92 773 D
3321122Y	Other nonferrous forgings, nsk	2002.. N 1997.. N	X X	X X	391 4 467
3321122YWV	Other nonferrous forgings, nsk	2002.. N 1997.. N	X X	X X	391 4 467
332112W	Nonferrous forging, nsk, total	2002.. N 1997.. N	X X	X X	19 169 35 973
332112WY	Nonferrous forging, nsk, total	2002.. N 1997.. N	X X	X X	19 169 35 973
332112WYWW	Nonferrous forging, nsk, for nonadministrative-record establishments	2002.. N 1997.. N	X X	X X	3 856 6 936
332112WYWY	Nonferrous forging, nsk, for administrative-record establishments	2002.. N 1997.. N	X X	X X	15 313 29 037

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. Product Class Shipments for Selected States: 2002 and 1997

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3321121	Hot impression die impact, press, and upset nonferrous forgings	
	United States..... 2002..	1 388 887
	..... 1997..	1 528 804
	California 2002..	276 390
	..... 1997..	334 305
	Michigan..... 2002..	157 923
	..... 1997..	89 678
3321122	Other nonferrous forgings	
	United States..... 2002..	436 467
	..... 1997..	518 512
	California 2002..	213 498
	..... 1997..	154 550

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
332112	Nonferrous forging		
00900001	Total materials .....2002..	X	688 569
	.....1997..	X	617 659
33200057	Fabricated metal products (excluding forgings) .....2002..	X	D
	.....1997..	N	N
33210001	Forgings .....1,000 s tons..2002..	S	89 334
	.....1997..	7.3	73 941
33120005	Steel ingot and semifinished shapes (blooms, billets, and slabs) (excluding castings, forgings, and fabricated metal products) .....1,000 s tons..2002..	S	70 194
	.....1997..	D	D
33120065	Steel bars, bar shapes, and other shapes and forms (excluding castings, forgings, and fabricated metal products) .....1,000 s tons..2002..	S	26 991
	.....1997..	D	D
33149101	Titanium and titanium-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....1,000 s tons..2002..	S	90 915
	.....1997..	138.8	67 498
33100074	All other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....1,000 s tons..2002..	D	D
	.....1997..	D	D
33100039	Aluminum and aluminum-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....1,000 s tons..2002..	S	173 271
	.....1997..	161.4	200 790
33149103	Nickel and nickel-base alloy, including nickel-copper alloys (excluding castings, forgings, and fabricated metal products) .....1,000 s tons..2002..	P4.1	39 086
	.....1997..	.4	3 464
33351400	Forging dies .....1,000 s tons..2002..	S	34 114
	.....1997..	2.1	8 223
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	87 133
	.....1997..	X	92 292
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	30 330
	.....1997..	X	9 673

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.